

What is claimed is:

1. A method for generating a real-time vertically and horizontally
downscaled video signal (20) of a video image (11) by an image generating and
processing block (12), comprising the steps of:

5 generating (30) a real-time video signal of the video image (11) by a camera
sensor (14) of the image generating and processing block (12),

generating (32) a real-time horizontally downsampled video signal (18) using
horizontal downscaling of the real-time video signal by the camera sensor (14), and

10 generating (38) the real-time vertically and horizontally downsampled video
signal (20) using vertical downscaling of the real-time horizontally downsampled video
signal (18) by a processing block (16) of the image generating and processing block
(12).

2. The method of claim 1, before the step of generating (38) a real-time
vertically and horizontally downsampled video signal (20), further comprising the step
15 of:

providing (36) said real-time horizontally downsampled video signal (18) from
the camera sensor (14) to the processing block (16) through a camera compact port
(CCP) bus (15) of the image generating and processing block (12).

3. The method of claim 1, wherein the camera sensor (14) has a camera
20 memory (14a).

4. The method of claim 1, wherein the processing block (16) has a
processing memory (16a).

5. The method of claim 1, further comprising the step of:

25 providing (40) the real-time vertically and horizontally downsampled video
signal (20) indicative of the video image (11) through an internal bus (25a) to a real-

time viewfinder display (22) and displaying said video image (11) on the real-time viewfinder display (22).

6. The method of claim 5, wherein the image generating and processing block (12) is a part of a camera-phone mobile device (10).

5 7. The method of claim 6, wherein the processing block (16) is a base band (BB) engine of the camera-phone mobile device (10).

8. The method of claim 6, further comprising the steps of:

encoding (42) the real-time vertically and horizontally downscaled video signal (20) by a video packing block (24) of the image generating and processing
10 block (12), thus generating an encoded video signal (27), and

providing said encoded video signal (27) through a further internal bus (27a, 27b, 27c) optionally to a file/stream block (28) and to a phone memory (28a) of the camera-phone mobile device (10).

9. The method of claim 1, further comprising the step of:

15 encoding (42) the vertically and horizontally downscaled video signal (20) by a video packing block (24) of the image generating and processing block (12), thus generating an encoded video signal (26).

10. An image generating and processing block (12), comprising:

a camera sensor (14), responsive to a video image (11), for generating a real-
20 time video signal of the video image (11) and for further generating a real-time horizontally downscaled video signal (18) using horizontal downscaling of the real-time video signal by the camera sensor (14); and

a processing block (16), responsive to the real-time horizontally downsampled video signal (18), for generating a real-time vertically and horizontally downsampled video signal (20) using vertical downscaling of the real-time horizontally downsampled video signal (18).

5 11. The image generating and processing block (12) of claim 10, wherein the camera sensor (14) has a camera memory (14a).

12. The image generating and processing block (12) of claim 10, wherein the processing block (16) has a processing memory (16a).

10 13. The image generating and processing block (12) of claim 10, further comprising:

a camera compact port (CCP) bus (15), responsive to the real-time horizontally downsampled video signal (18) from the camera sensor (14), for providing the real-time horizontally downsampled video signal (18) to the processing block (16).

14. A camera-phone mobile device (10), comprising:

15 an image generating and processing block (12) for generating a real-time vertically and horizontally downsampled video signal (20) of a video image (11), and for encoding said real-time vertically and horizontally downsampled video signal (20) thus generating an encoded video signal (27); and

20 a real-time viewfinder display (22), responsive to the real-time vertically and horizontally downsampled video signal (20), for providing a display of the video image (11) indicative by said real-time vertically and horizontally downsampled video signal (20).

15. A camera-phone mobile device (10) of claim 14, further comprising:

a file/stream block (28), responsive to the encoded signal (27b, 27c), for providing a call connection (28b) to other mobile devices; and

a phone memory (28a), responsive to the encoded signal (27a), for providing the encoded signal (27).

5 16. A camera-phone mobile device (10) of claim 14, wherein the image generating and processing block (12), comprising:

 a camera sensor (14), responsive to the video image (11), for generating the real-time video signal of the video image (11) and for further generating a real-time horizontally downsampled video signal (18) using horizontal downscaling of the real-time video signal by the camera sensor (14);

10

 a processing block (16), responsive to the real-time horizontally downsampled video signal (18), for generating the real-time vertically and horizontally downsampled video signal (20) using vertical downscaling of the real-time horizontally downsampled video signal (18).

15 17. The camera-phone mobile device (10) of claim 16, wherein the processing block (16) is a base band (BB) engine of the camera-phone mobile device (10).

 18. The camera-phone mobile device (10) of claim 16, wherein the camera sensor (14) has a camera memory (14a).

20 19. The camera-phone mobile device (10) of claim 16, wherein the processing block (16) has a processing memory (16a).

 20. The camera-phone mobile device (10) of claim 16, further comprising:

 a camera compact port (CCP) bus (15), responsive to the real-time horizontally downsampled video signal (18) from the camera sensor (14), for providing

the real-time horizontally downscaled video signal (18) to the processing block (16).